

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: NEINER, Christopher G.

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Serial Number: 10/752,928

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Filed: January 7, 2004

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Group Art Unit: 3727

For: CAN LID CLOSURE AND METHOD OF
JOINING A CAN LID CLOSURE TO A
CAN BODY

§

Examiner: Stephen J. Castellano

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE

Dear Sir:

In response to the Office Action dated December 26, 2006, Applicant responds as follows:

CLAIMS

1. (Currently Amended) A lid for a can body comprising:
a center panel having a central axis that is perpendicular to a diameter of the outer rim of said lid;
a reinforcing bead extending radially outward from the periphery of the center panel;
a ~~nonlinear~~ chuckwall having a first end and a second end, wherein the chuckwall is between the first and second ends, wherein the first end of the chuckwall is connected to the reinforcing bead, and wherein a line passing through the first and second ends of said the chuckwall is at an angle with respect to said the central axis of the center panel of from about 20° to about 80°, the chuckwall being nonlinear prior to and at least immediately after seaming; and
a peripheral curl portion having a height less than 0.091 inches extending from said the chuckwall, wherein the diameter of the center panel is less than 80% of the diameter of the peripheral curl portion.
2. (Currently Amended) The can lid according to claim 1 wherein a line passing through the first and second ends of said the chuckwall is at an angle with respect to said the central axis of the center panel of from about 30° to about 60°.
3. (Currently Amended) The can lid according to claim 1 wherein a line passing through the first and second ends of said the chuckwall is at an angle with respect to said the central axis of the center panel of from about 40° to about 50°.
4. (Currently Amended) The can lid according to claim 1 wherein the height of said the peripheral curl portion is from about 0.04 to about 0.09 inches.
5. (Currently Amended) The can lid according to claim 1 further comprising a transitional portion extending radially outward from said the chuckwall, wherein the peripheral curl portion extends radially outward from said the transitional portion.

6. (Currently Amended) The can lid according to claim 1 wherein said the center panel is substantially flat or planar.

7. (Currently Amended) The can lid according to claim 1 wherein said the center panel is arcuate.

8-9. (Cancelled)

10. (Currently Amended) The can lid according to claim 1 further comprising a step portion extending radially outward from said the chuckwall.

11. (Currently Amended) The can lid according to claim 10 wherein said the step portion is arcuate.

12. (Currently Amended) The can lid according to claim 11 wherein said the arcuate step portion has a radius of curvature of from about 0.02 to about 0.06 inches, the center-point of said the radius being located above the profile of said the lid.

13. (Currently Amended) The can lid according to claim 10 wherein said the chuckwall is an arcuate chuckwall.

14. (Currently Amended) The can lid according to claim 13 wherein a line passing through the first and second ends of said the arcuate chuckwall is at an angle with respect to said the central axis of the center panel of from about 30° to about 60°.

15. (Currently Amended) The can lid according to claim 13 wherein a line passing through the first and second ends of said the arcuate chuckwall is at an angle with respect to said the central axis of the center panel of from about 40° to about 50°.

16. (Currently Amended) The can lid according to claim 13 wherein said the arcuate chuckwall has a radius of curvature of from about 0.4 to about 1 inch, the center-point of said the radius located below the profile of said the lid.

17. (Currently Amended) The can lid according to claim 1 wherein said the annular countersink has a height of from about 0.030 to about 0.115 inches.

18. (Currently Amended) The can lid of claim 17 wherein said the chuckwall is an arcuate chuckwall having a radius of curvature of from about 0.4 to about 1 inch, the center-point of said the radius being located below the profile of said the lid.

19. (Currently Amended) The can lid of claim 17 further comprising a step portion extending radially outward from said the chuckwall.

20. (Currently Amended) The can lid according to claim 19 wherein said the chuckwall is an arcuate chuckwall.

21. – 26. (Canceled)

27. (Currently Amended) The can lid according to claim 1 wherein said the reinforcing bead is an annular countersink.

28. (Currently Amended) The can lid according to claim 1 wherein said the reinforcing bead is an annular fold.

29. (Currently Amended) The can lid according to claim 28 wherein said the annular fold is an isocline fold.

30. (Currently Amended) A lid for a can body comprising:
a center panel having a central axis that is coaxial with the longitudinal axis of the can body;

a first member having an interior wall, a curved bottom portion and an outer wall, wherein the interior wall is joined to the center panel at its upper edge and the height of the interior wall is greater than or equal to the height of the outer wall;

a second member, ~~that is nonlinear~~, extending radially outward from an upper portion of ~~said the~~ outer wall, the second member having a first end and a second end, wherein a line passing through the ends of ~~said the~~ second member is at an angle with respect to ~~said the~~ central axis of the center panel of from about 20° to about 80°, wherein the vertical-cross section forms a first curve that is comprised of a plurality of second curves, wherein the second member is nonlinear between the first and second ends, and wherein the second member is nonlinear prior to and at least immediately after seaming; and

a peripheral curl portion extending radially outward from ~~said the~~ second member, wherein the diameter of the center panel is less than 80% of the diameter of the peripheral curl portion.

31-34. (Cancelled)

35. (Currently Amended) The lid of Claim 30, wherein the second curves comprise lines.

36-40. (Cancelled)

41. (Currently Amended) A lid for a can body comprising:

a center panel having a central axis that is perpendicular to a diameter of the outer rim of ~~said the~~ lid;

a fold extending radially outward from the periphery of the center panel;

a ~~nonlinear~~ chuckwall having a first end and a second end, wherein the chuckwall is the first and second end, wherein ~~said the~~ first end of the chuckwall is connected to the reinforcing bead, and wherein a line passing through the first and second ends of ~~said the~~ chuckwall is at an angle with respect to ~~said the~~ central axis of the center panel of from about 20° to about 80°; and

a peripheral curl portion having a height less than 0.091 inches extending from ~~said the~~ chuckwall, wherein the diameter of the center panel is less than 80% of the diameter of the peripheral curl portion.

42. (Currently Amended) The can lid according to claim 41 wherein a line passing through the first and second ends of said the chuckwall is at an angle with respect to said the central axis of the center panel of from about 30° to about 60°.

43. (Currently Amended) The can lid according to claim 41 wherein a line passing through the first and second ends of said the chuckwall is at an angle with respect to said the central axis of the center panel of from about 40° to about 50°.

44. (Currently Amended) The can lid according to claim 41 wherein said annular the fold is an isocline fold.

REMARKS

Claims 1-7, 10-20, 27-30, 35, and 41-44 are pending. Reconsideration and allowance are respectfully requested in light of the above amendments and following remarks.

New Matter Objection and Rejections under 35 U.S.C. §112

The Examiner objected to the amendment filed on May 22, 2006 because the specification and claims assertedly contained new matter. Additionally, Claims 29, 31-34, and 36-40 stand rejected under 35 U.S.C. §112, first paragraph, as assertedly failing to comply with the written description requirement. Insofar as these objections and rejections may be applied to the specification and claims, Applicants respectfully traverse these objections and rejections.

Claims 31-34 and 36-40 have been cancelled.

Regarding Claims 29 and 44, again, all of the amendments are supported by FIGURES 1 and 2 of the specification, as originally filed. According to MPEP 2163(II)(A)(3), “[a]n applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole.” *See, e.g., Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1565 (“drawings alone may provide a ‘written description’ of an invention as required by Sec. 112”); *see also In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) (the drawings of applicant’s specification provided sufficient written descriptive support for the claim limitation at issue). Specifically, an isocline fold is shown in Figure 1 as follows:

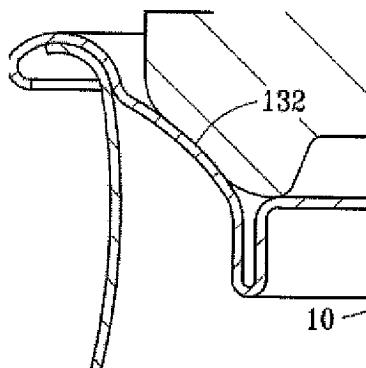


Figure 1 (as originally filed)

Applicant is completely perplexed as to the difficult in claiming what is shown (meaning that Applicant does not know what “several layer” Examiner refers to), and Applicant invites and respectfully requests that the Examiner please suggest a term so that Applicant can understand the Examiner’s position.

Rejections – 35 U.S.C. §103(a)

Claims 1-7, 10-20, and 27-40 stand rejected under 35 U.S.C. §103(a) in view of U.S. Patent No. 4,809,861 by Wilkinson et al. (“Wilkinson”) and U.S. Patent No. 6,065,634 by Brifcani et al. (“Brifcani”). Insofar as they may be applied against the Claims, these rejections have been overcome.

Rejected independent Claims 1, 30, and 36 recite a distinguishing characteristic of the present invention, namely, a nonlinear chuckwall or second member. Specifically, neither Wilkinson and Brifcani do not disclose, singularly or in combination, a nonlinear chuckwall or second member, which is nonlinear prior to and after seaming. Additionally, all amendments made in this Response are supported by Figures 3 and 6 of the originally filed Application.

To clarify Applicant's previous arguments, which in retrospect were somewhat confusing and which Applicant withdraws, Applicant would like to point out that Wilkinson and Brifcani describe two different generations in the evolution of can lid designs. These two designs do not disclose the claimed invention, singularly or in combination, for at least the following reasons.

First, turning to Wilkinson, Wilkinson discloses an older generation can lid design. Typically, this lid design was employed with larger (and largely un-necked) cans, as shown in Figure 5 of Wilkinson. As can also be seen in Figure 5, when seamed, the chuckwall is linear and abuts or is largely adjacent to the wall of the can throughout the majority of the chuckwall. Even though a slightly curved chuckwall is shown in Figure 8 of Wilkinson, this view is prior to any seaming (see col. 3, lns. 52-59). As can be seen in Figure 5 (again) the chuckwall or second member becomes linear when seamed. The linear chuckwall abutting the can wall was appropriate for this generation of can lid because there was not the same concern about reduction in relative diameter of can ends, which has come about in the last 15 years.

Brifcani, on the other hand, is of the newer generation of can lids (that is specifically aimed at reducing the relative diameter of the can lid). As can be seen in Figure 7 of Brifcani, the chuckwall (24) does not abut the can, but instead, a gap exists between the chuckwall and the wall of the can. This design, though, is prone to "peak-and-leak" problems. To explain, "peak" occurs when a full can (containing a liquid or incompressible fluid) is dropped axial forces cause deformation of the lid or "peak," mainly at the juncture between countersink and chuckwall. Because of the weakening caused by the deformation, internal pressures from the fluid(s) fracture or pierce the lid allowing the liquid to "leak."

The claimed invention, on the other hand, was designed to address the shortcomings of both lids. By not having the chuckwall or second member remain separate from the can wall (at

an angle “from about 20° to about 80°”) similar to Brifcani, the claimed invention is of a generation after Brifcani (addressing some of the same problems in Brifcani). Also, because the chuckwall or second member of the claimed invention is nonlinear after seaming (while Brifcani’s chuckwall is linear after seaming), the claimed invention has more structural integrity than Brifcani (especially when axial forces are applied that cause deformation) and does not suffer from the same “peak-and-leak” problems. Therefore, the claimed invention provides benefits that Wilkinson and Brifcani do not. Accordingly, Applicant respectfully requests that the rejections of Claims 1, 30, and 41 under 35 U.S.C. §103(a) in view of Wilkinson and Brifcani be withdrawn and that Claims 1, 30, and 41 be allowed.

Claims 2-7, 10-20, 27-29, 35, and 42-44 depend on and further limit one of Claims 1, 30, or 36. Hence, for at least the aforementioned reasons, these Claims would be deemed to be in condition for allowance. Applicant respectfully requests that the rejections of dependent Claims 2-7, 10-20, 27-29, 35, and 42-44 also be withdrawn.

Conclusion

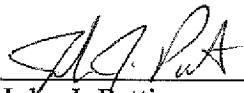
Applicant has now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-7, 10-20, 27-30, 35, and 41-44.

The Commissioner is hereby authorized to charge the fee (\$120.00) for a one (1) month extension of time in which to file this Response, and any other required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper, to Deposit Account 50-2180 of Storm LLP.

Should the Examiner require any further clarification to place this Application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

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